

AMENDMENTS TO THE CLAIMS

Please replace all prior versions, and listings, of claims in the application with the following listing of claims:

1-15. (Cancelled)

16. (Currently Amended) An apparatus for processing data at a node in a data network, wherein the data network connects a plurality of nodes and at least a portion of the plurality of the nodes form a multicast group, the apparatus comprising:

a data store that stores a plurality of entries associated with the multicast group, wherein

each entry identifies a source that published the entry; and

one or more processors comprising one or more sequences of instructions which when

executed by one or more processors, cause the one or more processors to perform;

logic that disseminates the plurality of entries to members of the multicast group;

logic that receives, from a node that is not a member of the multicast group, a request to run a query, wherein the query specifies matching criteria;

logic that runs the query against the entries in the data store;

logic that indicates that the apparatus has been designated as a sole rendezvous node in the multicast group, wherein designation as the sole rendezvous node indicates that the apparatus is to disseminate the plurality of entries to members of the multicast group; and

logic that disseminates one or more entries that satisfy the matching criteria to
the node that is not a member of the multicast group.

17. (Cancelled)

18. (Previously Presented) The apparatus of Claim 16, further comprising logic that adds a first entry to the plurality of entries in the data store in response to a request from a first node to add the first entry.

19. (Previously Presented) The apparatus of Claim 18, wherein the logic that adds a first entry to the plurality of entries further automatically disseminates the first entry to the plurality of the nodes that form the multicast group in response to the request from the first node to add the first entry to the plurality of entries.

20. (Previously Presented) The apparatus of Claim 16, further comprising logic that deletes a first entry of the plurality of entries in the data store in response to a request from a first node to relinquish the first entry.

21. (Previously Presented) The apparatus of Claim 20, further comprising logic that indicates, to the plurality of the nodes that form the multicast group, that the first entry has been relinquished, wherein the indication is in response to the request from the first node to relinquish the first entry.

22. (Previously Presented) The apparatus of Claim 16, wherein the source that published the entry is not a member of the multicast group.

23. (Previously Presented) The apparatus of Claim 16, wherein the source that published the entry is a member of the multicast group.

24. (Previously Presented) The apparatus of Claim 16, wherein each entry is associated with a priority that specifies its delivery priority relative to other entries.

25. (Cancelled)

26. (Previously Presented) A method for operating an apparatus coupled to a selected node in a data network, wherein the data network connects a plurality of nodes and at least a portion of the plurality of the nodes, including the selected node, form a multicast group, the method comprising steps of:

storing, at the apparatus, a plurality of entries associated with the multicast group,

wherein each entry identifies a source that published the entry;

disseminating the plurality of entries to members of the multicast group;

receiving a request from a node that is not member of the multicast group to run a query against the entries stored at the apparatus, wherein the query specifies matching criteria;

indicating that the apparatus has been designated as a sole rendezvous node in the

multicast group, wherein designation as the sole rendezvous node indicates that

the apparatus is to disseminate the plurality of entries to members of the multicast group; and
disseminating one or more entries that satisfy the matching criteria to the node that is not member of the multicast group.

27. (Cancelled)

28. (Previously Presented) The method of Claim 26, further comprising adding a first entry to the plurality of entries stored at the apparatus in response to a request from a first node to add the first entry.

29. (Previously Presented) The method of Claim 28, further comprising automatically disseminating the first entry to the plurality of the nodes that form the multicast group in response to the request from the first node to add the first entry.

30. (Previously Presented) The method of Claim 26, further comprising deleting a first entry of the plurality of entries stored at the apparatus in response to a request from a first node to relinquish the first entry.

31. (Previously Presented) The method of Claim 30, further comprising indicating to the plurality of the nodes that form the multicast group that the first entry of the plurality of entries stored at the apparatus has been relinquished, wherein the indicating is performed in response to the request from the first node to relinquish the first entry.

32. (Previously Presented) The method of Claim 26, wherein the source that published the entry is not a member of the multicast group.
33. (Previously Presented) The method of Claim 26, wherein the source that published the entry is a member of the multicast group.
34. (Previously Presented) The method of Claim 26, wherein each entry is associated with a priority that specifies its delivery priority relative to other entries.
35. (Previously Presented) The method of Claim 26, further comprising:
receiving, from a particular node, a request to run a query against the entries stored at
the apparatus, wherein the query specifies a source that published one or more
entries; and
asynchronously notifying the particular node of a modification to a first entry;
wherein the asynchronously notifying the particular node is performed in response to the
source that published the first entry modifying the first entry.
36. (Currently Amended) A data network for transmitting data, wherein the data network connects a plurality of nodes and at least a portion of the plurality of the nodes form a multicast group, the data network comprising:
a plurality of apparatuses, each of the apparatuses comprising:
a data store that stores a plurality of entries associated with the multicast group,
wherein each entry identifies a source that published the entry; and

one or more processors comprising one or more sequences of instructions which when executed by one or more processors, cause the one or more processors to perform:

logic that disseminates the plurality of entries to members of the multicast group;

logic that receives, from a node that is not a member of the multicast group, a request to run a query, wherein the query specifies matching criteria;

logic that runs the query against the entries in the data store;

logic that indicates that the apparatus has been designated as a sole rendezvous node in the multicast group, wherein designation as the sole rendezvous node indicates that the apparatus is to disseminate the plurality of entries to members of the multicast group; and

logic that disseminates one or more entries that satisfy the matching criteria to the node that is not a member of the multicast group.

37. (New) The apparatus of Claim 16, wherein the plurality of entries to members of the multicast group comprises updates to data stores associated with nodes that are not members of the multicast group.

38. (New) The method of Claim 26, wherein the plurality of entries to members of the multicast group comprises updates to data stores associated with nodes that are not members of the multicast group.

39. (New) The data network of Claim 36, wherein the plurality of entries to members of the multicast group comprises updates to data stores associated with nodes that are not members of the multicast group.